

Exhibit A

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Exhibit A-1: Proposed Constructions for the '389 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1, 2, 32, 33	"Input Section"	<p>Not 112(f). "the portion of a device that receives inputs."</p> <p>ALTERNATIVELY, if 112(f) applies: Function: Converting said specific program to an Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation Structure: Input section 101, including a demodulator, and equivalents</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: Converting said specific program to an Moving Pictures Experts Group (MPEG) formatted stream for internal transfer and manipulation</p> <p>Structure: The structure(s) disclosed at 3:30-61, 4:15-18, and 6:26-40</p>
1, 32	"Media Switch"	"hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory"	As disclosed in Samsung's P.R. 4-2 disclosures, Samsung contends that this term is properly construed in the context of the entire claim phrase "providing a Media Switch, wherein said Media Switch parses said MPEG stream, said MPEG stream is separated into its video and audio components."
1, 32	"providing a Media Switch, wherein said Media Switch parses said MPEG stream, said MPEG stream is separated into its video and audio components"	The larger phrase has it plain meaning, read in conjunction with "Media Switch" as construed above.	"providing hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory, wherein said device, portion of a device, or code parses said MPEG stream, said MPEG stream is separated into its video and audio components"

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1	"storing said video and audio components on a storage device"	Plain Meaning/ No Construction Necessary	"storing the separated video and audio components on a storage device"
32	"a module for storing said video and audio components on a storage device"	<p>Not 112(f). Plain Meaning/ No Construction Necessary</p> <p>ALTERNATIVELY, if 112(f) applies: Function: Storing said video and audio components on a storage device. Structure: transform object 902, programmed for the "temporal transform" at 8:2-7, and equivalents</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: Storing the separated video and audio components on a storage device.</p> <p>Structure: This claim limitation is invalid as indefinite for failure to disclose and clearly link structure that corresponds to the recited function.</p>
1, 3, 32, 34	"Output Section"	<p>Not 112(f). "the portion of a device that decodes data from memory and produces output signals."</p> <p>ALTERNATIVELY, if 112(f) applies: Function: (1) extracting said video and audio components from said storage device; (2) assembles said video and audio components into an MPEG stream; and (3) sending said MPEG stream to a decoder Structure: Output Section 103, including the data and operations described 7:50-51 and 8:6-9 and equivalents</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: (1) extracting the video and audio components from said storage device; (2) assembling the video and audio components into an MPEG stream; and (3) sending the MPEG stream to a decoder.</p> <p>Structure: This claim limitation is invalid as indefinite for failure to disclose and clearly link structure that corresponds to the recited function.</p>

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
5, 36	"simultaneously"	"operations are performed at the same time"	"at exactly the same time"
31, 61	"source object . . ."	Not 112(f). "a collection of data and operations that (1) extracts video and audio data from a physical data source, (2) obtains a buffer from a transform object, (3) converts video data into data streams, and (4) fills the buffer with the streams"	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function:</p> <p>(1) extracting video and audio data from said physical data source</p> <p>(2) obtaining a buffer from said transform object</p> <p>(3) converting video data into data streams</p> <p>(4) filling said buffer with said streams</p> <p>Structure: Source object (901) and associated program logic as described in column 8, lines 39-51</p>

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
31, 61	“transform object . . .”	Not 112(f). “a collection of data and operations that transforms the form of data upon which it operates”	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function:</p> <ul style="list-style-type: none"> (1) Storing and retrieving data streams onto a storage device (2) Providing buffers to the source object (3) Providing data stream buffers to the sink object (4) automatically flow controlling the source object (5) automatically flow controlling the sink object <p>Structure: Transform object (902) and associated program logic as described in column 7, lines 51 through 56, column 8, lines 9 through 21, column 8, lines 45 through 65, and column 9, lines 33 through 47</p>

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
31, 61	"sink object . . ."	Not 112(f). "a collection of data and operations that (1) obtains data stream buffers from a transform object and (2) outputs the streams to a video and audio decoder"	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: (1) obtaining data stream buffers from said transform object (2) outputting said streams to a video and audio decoder</p> <p>Structure: Sink object (903) and associated program logic as described in column 8, lines 52 through 65</p>
31, 61	"control object . . ."	Not 112(f). "a collection of data and operations that receives commands from a user that control the flow of broadcast data"	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: (1) receiving commands from a user (2) sending flow command events to the source, transform, and sink objects Structure: Control object (917) and associated program logic as described in column 9, lines 22 through 35</p>
31, 61	"object"	"a collection of data and operations"	See "source object . . ."; "transform object . . ."; "sink object . . ."; and "control object . . ."
1, 31, 32, 61	"parse"	"analyze"	No Construction Necessary

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
31, 61	"accepts broadcast data"	"accepts data that was transmitted"	No Construction Necessary
1, 32	"accepting television (TV) broadcast signals, wherein said TV signals are based on a multitude of standards"	Understood as the term has been construed by the Federal Circuit, e.g. in Case No. 2006-1574, Slip Op at 7, 9.	No Construction Necessary

Exhibit A-2: Proposed Constructions for the '195 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
58, 78	"a linear cache for storing information from said data stream"	"a general device for buffering the information contained in a stream of digital information"	"a cache that stores a single stream of digital information in proper sequence"
119	"a plurality of linear caches for storing information from said data streams as digital blocks"	"More than one general device for buffering the information contained in a stream of digital information"	"a plurality of caches that each store a single stream of digital information in proper sequence"
121	"stream capture means for capturing information for a particular data stream type"	<p>112(f) applies.</p> <p>Function: "capturing information for a particular data stream type and encoding it before storing it in the linear cache"</p> <p>Structure: "capture mechanism as described in column 7, lines 4 through 15, and equivalents thereof."</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: capturing information for a particular data stream type</p> <p>Structure: capture mechanism as described in column 7, lines 4 through 26</p>

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
78	“cache control means for controlling a rate of said streaming access to said linear cache; . . . cache control means sends clock events to said cache access means to control a rate and direction of said streaming access”	Construe as in claim 58, i.e. “the Cache Control means of claim 58, wherein said structure also includes clock events.”	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: sending clock events to the cache access means to control a rate and direction of streaming access to the linear cache</p> <p>Structure: This claim limitation is invalid as indefinite for failure to disclose and clearly link structure that corresponds to the recited function. Alternatively: buffer controller (201), stream clock (202), and rate multiplier</p>
119	“said linear cache maintains a window that represents a time span into a past history of said data stream that includes a most recently stored portion of said data stream”	Construe as in claims 58 and 78	Indefinite
119	“discard”	Construe as in claims 58 and 78	Indefinite

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
73, 92	“cache access means for selecting a portion of the linear cache for streaming access to information stored therein . . . said cache access means implements a reverse function by moving a current block indicator backwards through said cache”	<p>“the cache access means moving the playback pointer towards the beginning of the linear cache”</p> <p>ALTERNATIVELY: Function: the cache access means moving the playback pointer towards the beginning of the linear cache Structure: Cache Access Means programmed to implement the algorithm described at 8:37-43, and equivalents thereof.</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: selecting a portion of the linear cache for streaming access to information stored therein and performing a reverse function by moving a current block indicator backwards through said cache Structure: buffer controller (201) programmed to execute the reverse algorithm described at 8:34-46 and a current block indicator</p>
75, 94	“cache access means for selecting a portion of the linear cache for streaming access to information stored therein . . . said cache access means reverts to moving said current block indicator forward through said cache if said current block indicator cannot be moved past the oldest block in said linear cache”	<p>“the cache access means reverting to normal playback when the playback pointer reaches the beginning of the linear cache”</p> <p>ALTERNATIVELY: Function: the cache access means reverting to normal playback when the playback pointer reaches the beginning of the linear cache Structure: A cache access means programmed to implement the algorithm described at 8:47-54, and equivalents thereof.</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: selecting a portion of the linear cache for streaming access to information stored therein, performing a reverse function by moving a current block indicator backwards through said cache, and reverting to moving said current block indicator forward through said cache if said current block indicator cannot be moved past the oldest block in said linear cache Structure: buffer controller (201) programmed to execute the reverse and revert algorithms described at 8:34-56 and a current block indicator</p>

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
76, 95	“cache access means for selecting a portion of the linear cache for streaming access to information stored therein . . . said cache access means implements a pause function by locking a current block indicator to one block in said linear cache”	<p>“the cache access means pausing playback by fixing the playback pointer at a position in the linear cache”</p> <p>ALTERNATIVELY: Function: the cache access means pausing playback by fixing the playback pointer at a position in the linear cache Structure: A cache access means programmed to implement the algorithm described at 8:60-9:1, and equivalents thereof.</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: selecting a portion of the linear cache for streaming access to information stored therein and performing a pause function by locking a current block indicator to one block in said linear cache Structure: buffer controller (201) programmed to execute the pause algorithm described at 8:58-9:14 and a current block indicator</p>
77	“cache access means for selecting a portion of the linear cache for streaming access to information stored therein . . . said cache access means reverts to moving said current block indicator forward through said cache if said current block indicator is moved past the earliest block in said linear cache”	<p>“the cache access means reverting to normal playback if the playback pointer is paused at a position that reaches the beginning of the linear cache”</p> <p>ALTERNATIVELY: Function: the cache access means reverting to normal playback if the playback pointer is paused at a position that reaches the beginning of the linear cache Structure: A cache access means programmed to implement the algorithm described at 9:15-19, and equivalents thereof</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: selecting a portion of the linear cache for streaming access to information stored therein, performing a pause function by locking a current block indicator to one block in said linear cache, and reverting to moving said current block indicator forward through said cache if said current block indicator is moved past the earliest block in said linear cache</p> <p>Structure: buffer controller (201) programmed to execute the pause and revert algorithms described at 8:58-9:22 and a current block indicator</p>

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
96	“cache access means for selecting a portion of the linear cache for streaming access to information stored therein . . . said cache access means reverts to moving said current block indicator forward through said cache if a clock event results in moving said current block indicator past the earliest block in said linear cache”	<p>“the cache access means reverting to normal playback if the playback pointer is paused at a position that reaches the beginning of the linear cache”</p> <p>ALTERNATIVELY:</p> <p>Function: the cache access means reverting to normal playback if the playback pointer is paused at a position that reaches the beginning of the linear cache</p> <p>Structure: A cache access means programmed to implement the algorithm described at 9:15-19, and equivalents thereof.</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: selecting a portion of the linear cache for streaming access to information stored therein, performing a pause function by locking a current block indicator to one block in said linear cache, and reverting to moving said current block indicator forward through said cache if a clock event results in moving said current block indicator past the earliest block in said linear cache</p> <p>Structure: buffer controller (201) programmed to execute the pause algorithm described at 8:58-9:22 and a current block indicator</p>

Exhibit A-3: Proposed Constructions for the '472 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1, 12, 15	"input section"	<p>Not 112(f). "the portion of a device that receives inputs."</p> <p>ALTERNATIVELY, if 112(f) applies: Function: (1) Acquiring an input signal (2) Passing the input signal to the output section as a transport stream Structure: Input section 101, including any of tuners 201-204 and demodulator 1601, and equivalents thereof</p>	<p>This term should be governed by 35 U.S.C. § 112(6).</p> <p>Function: (1) Acquiring an input signal (2) Passing the input signal to the output section as a transport stream</p> <p>Structure: The structure(s) disclosed at 4:29-59, 5:11-13, and 7:16-29.</p>
1	"media switch"	"hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory"	"hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory, and that parses and separates the transport stream into its audio and video components"
1	"multimedia data stream processor"	"media switch/media manager processor(s) that processes multimedia data"	"a processor that includes (1) a system interface, (2) a media stream identifier, (3) a media stream processor core, (4) a multi-channel state engine, and (5) a media stream identification generator"
1	"simultaneous" / "simultaneously"	"operations are performed at the same time"	"at exactly the same time"
30	"front panel navigation cluster"	"exterior buttons or keys to control the device"	"grouping of hardware buttons or keys on a front panel that control the flow of multimedia data"

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1, 30	"media manager"	"the portion of the media switch that has a host processor, DMA controller, bus arbiter and multimedia data stream processor"	Indefinite
12, 15	"transport interface"/ "transport stream interface"	"an interface that receives transport streams"	"a physical connection between two components over which a transport stream is sent"
13-16, 20	"transport stream decoder/ graphics subsystem"	"A decoder that decodes the transport stream and outputs the decoded stream as a TV output signal"	"a subsystem that decodes a transport stream and generates graphics for display"
1, 32	"data bus"	"a bus used to communicate data"	"a conductor for transmitting data between components of the system"

Exhibit A-4: Proposed Constructions for the '476 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1, 8	"input section"	Not 112(f). "the portion of a device that receives inputs." ALTERNATIVELY, if 112(f) applies: Function: (1) Acquiring an input signal (2) Creating a transport stream from the input signal Structure: Input section 101, including any of tuners 201-204 and demodulator 1601, and equivalents thereof	This term should be governed by 35 U.S.C. § 112(6). Function: (1) Acquiring an input signal (2) Creating a transport stream from the input signal Structure: The structure(s) disclosed at 3:26-56, 4:8-10, and 6:13-26.
1, 13	"media switch"	"hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory"	"hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory, and that parses and separates the transport stream into its audio and video components"
1	"multimedia data stream processor"	"media switch/media manager processor(s) that processes multimedia data"	"a processor that includes (1) a system interface, (2) a media stream identifier, (3) a media stream processor core, (4) a multi-channel state engine, and (5) a media stream identification generator"
13	"front panel navigation cluster"	"exterior buttons or keys to control the device"	"grouping of hardware buttons or keys on a front panel that control the flow of multimedia data"
1	"simultaneous" / "simultaneously"	"operations are performed at the same time"	"at exactly the same time"

6-10	“transport stream decoder/graphics subsystem”	“A decoder that decodes the transport stream and outputs the decoded stream as a TV output signal”	“a subsystem that decodes a transport stream and generates graphics for display”
8	“transport stream interface”	“an interface that receives transport streams”	“a physical connection between two components over which a transport stream is sent”

Exhibit A-5: Proposed Constructions for the '043 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1	"channel changer"	"A list of TV channels—from which a TV channel may be selected—that a user may access and navigate independent of an electronic program guide or any program-specific information"	"a graphical user interface element including channel objects ¹ that allows selection of and tuning to a channel"
1	"customized list"	Plain Meaning/ No Construction Necessary.	"a user selected list of channels for display in a list object"
1	"said customized channel changer having the same configuration as said regular channel changer"	Plain Meaning/ No Construction Necessary.	"the on screen location and format of the channel objects of the channel changers remain the same between the first and second modes"

¹ Samsung intends that the meaning of "channel objects," as used in proposed constructions for '043 patent claim terms, corresponds to Samsung's proposed construction for the claim term "channel object" that appears in the '333 patent. *See* Exhibit A-6 Proposed Constructions for the '333 Patent.

Exhibit A-6: Proposed Constructions for the ‘333 Patent

Claim(s)	Term or Phrase	TiVo’s Proposed Construction	Samsung’s Proposed Construction
1, 2	“channel changer”	“A list of TV channels—from which a TV channel may be selected—that a user may access and navigate independent of an electronic program guide or any program-specific information”	Same as “graphical channel changer,” i.e., “a graphical user interface element including channel objects that allows selection of and tuning to a channel”
1	“graphical channel changer”	Same as “channel changer,” i.e., “A list of TV channels—from which a TV channel may be selected—that a user may access and navigate independent of an electronic program guide or any program-specific information”	“a graphical user interface element including channel objects that allows selection of and tuning to a channel”
19	“graphical channel selector”	Same as “channel changer,” i.e., “A list of TV channels—from which a TV channel may be selected—that a user may access and navigate independent of an electronic program guide or any program-specific information”	“a graphical user interface element including channel objects that allows selection of and tuning to a channel”
19	“channel selector”	Same as “channel changer,” i.e., “A list of TV channels—from which a TV channel may be selected—that a user may access and navigate independent of an electronic program guide or any program-specific information”	Same as “graphical channel selector,” i.e., “a graphical user interface element including channel objects that allows selection of and tuning to a channel”
1, 19	“channel object”	“An icon indicating a TV channel”	“a selectable graphical user interface object that depicts a channel name and channel number of a TV channel”

Exhibit A-7: Proposed Constructions for the '592 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1, 2, 4-7, 12, 13, 17-19	"home device"	"Electronic devices that are typically found in the home, with the exception of general purpose computers (i.e. personal computers (PCs), laptop computers, etc.)"	"a controllable networked device typically found in the home, other than a general purpose computer (i.e. personal computer or laptop)"
1, 5, 6, 12, 13, 15, 17, 18, 19	"home network"	"A system within the home to which any two or more devices may be connected and on which such devices may be controlled or exchange data. A home network exists independent of any particular device connected to it and independent of a connection to the Internet"	No construction necessary.
1	"autonomous manner"	"Associate home devices on a home network without human intervention"	No construction necessary.
1	"capable of displaying a user interface"	"Possessing its own display capability, i.e., comprising a screen for displaying HTML pages"	No construction necessary.
5, 6, 7, 17, 18	"configuration manager"	"Software that dynamically allocates a unique IP address and logical name for each home device that becomes available on the home network and that is capable of maintaining the IP address and logical name pairs of each home device that becomes available on the home network"	No construction necessary.

Exhibit A-8: Proposed Constructions for the '090 Patent

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
1, 2	"linkage viewing"	"Successively viewing presently broadcasted TV programming without interruption and without special manipulation of the user (i.e., powering on the TV, changing the channel, etc.) on a TV and a mobile communication apparatus"	No construction necessary.
1, 2	"linkage viewing command"	"An instruction sent between a TV and a mobile communication apparatus to initiate linkage viewing that includes data information"	No construction necessary.
1	"selecting a TV channel corresponding to a current channel on which the program is being viewed on the mobile communication apparatus based on the received data information"	"Tuning the TV to the current channel bearing the presently broadcasted TV programming being viewed on the mobile communication apparatus as a result of receiving information about that programming from the mobile communication apparatus"	No construction necessary.
1	"displaying the program, received from a broadcaster independently of the mobile communication apparatus"	"Displaying on the TV, without interruption or user manipulation, the same, presently broadcasted TV programming that was being viewed on the mobile communication apparatus, whereby the broadcast source of that programming is different from the source of the programming viewed on the mobile communication apparatus and is not sourced by the mobile communication apparatus"	No construction necessary.
2	"receiving the linkage viewing command through the mobile communication apparatus"	"Where the linkage viewing command is received by and processed by the mobile communication apparatus without user intervention"	No construction necessary.

Claim(s)	Term or Phrase	TiVo's Proposed Construction	Samsung's Proposed Construction
4	“wherein the data information comprises at least one of the broadcasting station information and a channel number”	“Wherein the data information contained within the linkage-viewing command includes either or both of broadcasting station information or a channel number sufficient to ‘select[] a TV channel corresponding to a current channel on which the program is being viewed’ ...etc.”	No construction necessary.